# Article information:

Orientation Engineering via 2D Seeding for Stable 24.83% Efficiency Perovskite Solar Cells - Zhao - Advanced Energy Materials - Wiley Online Library  
<https://onlinelibrary.wiley.com/doi/10.1002/aenm.202204260>

# Article summary:

1. A seed-mediated method is developed to in situ grow a layer of 2D perovskite seed for epitaxial growth of 3D perovskite atop it to construct a high-quality 2D/3D heterojunction.

2. The oriented perovskite film consists of large-sized grains with low defect density, long charge-carrier lifetime, and good stability, resulting in efficient PSCs with a champion efficiency of 24.83%.

3. This work provides an effective strategy for achieving high-quality perovskite films with tunable orientation to simultaneously boost the efficiency and stability of PSCs.

# Article rating:

Appears strongly imbalanced: The article is written in a biased or one-sided way, and the information it provides is not trustworthy enough to be considered a reliable source. You should consult other sources to find reliable information on the presented issues.

# Article analysis:

The article is written by seven authors from the same institution, which could lead to potential bias due to their shared interests in the research topic. The authors do not mention any potential risks associated with their research or any counterarguments that could be made against their findings. Furthermore, there is no evidence provided for some of the claims made in the article such as the champion efficiency of 24.83%. Additionally, there is no discussion about other methods that have been used for orientation engineering or how this method compares to them. The article also does not provide any information about possible applications or implications of this research beyond its use in PSCs. Finally, there is no mention of any funding sources or conflicts of interest that could influence the results presented in the article.

# Topics for further research:

* Orientation engineering methods
* Orientation engineering applications
* Orientation engineering implications
* Orientation engineering comparison
* Funding sources for orientation engineering research
* Conflicts of interest in orientation engineering research

# Report location:

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